

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:  
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# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Applicant's or agent's file reference <b>COBR-10811</b>		Date of mailing (day/month/year) <b>16 JAN 2007</b> <b>FOR FURTHER ACTION</b> See paragraph 2 below	
International application No. <b>PCT/US05/25658</b>	International filing date (day/month/year) <b>19 July 2005 (19.07.2005)</b>	Priority date (day/month/year) <b>19 July 2004 (19.07.2004)</b>	
International Patent Classification (IPC) or both national classification and IPC <b>IPC: B21F 25/00( 2006.01);E04H 17/04( 2006.01)</b> <b>USPC: 256/5,2,8,7,33</b>			
Applicant <b>COBRA SYSTEM, INC.</b>			

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I      Basis of the opinion
- ☐ Box No. II      Priority
- ☐ Box No. III      Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV      Lack of unity of invention
- ☒ Box No. V      Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI      Certain documents cited
- ☐ Box No. VII      Certain defects in the international application
- ☒ Box No. VIII      Certain observations on the international application

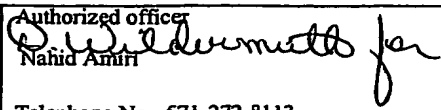
**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Date of completion of this opinion <b>06 November 2006 (06.11.2006)</b>	Authorized officer  Nahid Amiri Telephone No. 571-272-8113
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**WRITTEN OPINION OF THE  
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**Box No. I Basis of this opinion**

1. With regard to the language, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed  
☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing  
☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper  
☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.  
☐ filed together with the international application in electronic form.  
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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**Box No. IV Lack of unity of invention**

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the applicable time limit:
- ☐ paid additional fees
  - ☐ paid additional fees under protest and, where applicable, the protest fee
  - ☐ paid additional fees under protest but the applicable protest fee was not paid
  - ☒ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with
  - ☒ not complied with for the following reasons:  
See the lack of unity section of the International Search Report (Form PCT/ISA/210)

4. Consequently, this opinion has been established in respect of the following parts of the international application:
- ☐ all parts.
  - ☒ the parts relating to claims Nos. 1-10, 19-108 and 118-129

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**Box No. V Reasoned statement under Rule 43 bis.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)

Claims Please See Continuation Sheet YES

Claims Please See Continuation Sheet NO

Inventive step (IS)

Claims Please See Continuation Sheet YES

Claims Please See Continuation Sheet NO

Industrial applicability (IA)

Claims Please See Continuation Sheet YES

Claims Please See Continuation Sheet NO

**2. Citations and explanations:**

Please See Continuation Sheet

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**Box No. VIII Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the questions whether the claims are fully supported by the description, are made:

drawings are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 7 because: "at least one blister on the coil" of claim 102, line 4.

Claims 98-101 are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 indefinite because for the following reasons: with respect to claim 9, line 3, it is unclear which "trusses" applicant is referring to as "a plurality of trusses including the first truss". Is this truss same as "truss" of line 2?

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**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

**V.1. Reasoned Statements:**

The opinion as to Novelty was positive (Yes) with respect to claims 25-89, 104-108, and 122

The opinion as to Novelty was negative (No) with respect to claims 1-10, 19-24, 90-103, 118-121, and 123-128

The opinion as to Inventive Step was positive (Yes) with respect to claims 1-10, 19-24, 90-103, 118-121, 53, 55, 56, 75-89, and 123-128

The opinion as to Inventive Step was negative (NO) with respect to claims 25-52, 54, 70-74, 104-108, 122, and 129

The opinion as to Industrial Applicability was positive (YES) with respect to claims 1-10, 19-108, and 118-129

The opinion as to Industrial Applicability was negative (NO) with respect to claims NONE

**V. 2. Citations and Explanations:**

Claims 1-10 and 19-24 lack of novelty under PCT Article 33(2) as being anticipated by US Patent No. 5,139,234 Cochrane.

With respect to claim 1, Cochrane disclose a barbed tape concertina product (Figs. 1-4) comprising a strand of the product in the form of a continuous helical coil including at least a first pair of loops and a second pair of loops; a first attachment element (56) at a first attachment point (70) of the first pair of loops and holding the first pair of loops together; and a second attachment element (56) at a first attachment point (70) of the second pair of loops and holding the second pair of loops together; wherein the first attachment element (56) is circumferentially offset relative to the second attachment element.

With respect to claim 2, Cochrane discloses (Fig. 1) that the first and second pairs of loops are adjacent pairs of loops.

With respect to claim 3, Cochrane discloses (Fig. 1) that further comprising at least one additional attachment element (56) at a second attachment point (72) on the strand in a helically progressive position between the first attachment element and the second attachment element, the at least one additional attachment element holding the first and second pairs of loops together.

With respect to claim 4, Cochrane discloses (Fig. 3) that further comprising a plurality of additional attachment elements (56) at respective additional attachment points in helically progressive positions on the strand between the first and second attachment elements (56).

With respect to claim 5, Cochrane discloses (Fig. 1) that the continuous coil further comprises additional pairs of loops and additional attachment elements holding the loops of each pair together and holding the pairs of loops together; the attachment elements (56) generally positioned on one pair of loops so that each attachment element (56) is circumferentially offset relative to all other attachment elements on an adjacent pair of loops.

With respect to claim 6, Cochrane discloses (Fig. 1) that the attachment elements are positioned in a predetermined pattern on the continuous coil.

With respect to claim 7, Cochrane discloses (Fig. 1) that the pattern is a repeating pattern.

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With respect to claim 8, Cochrane discloses (Fig. 1) that the pattern provides a predetermined natural configuration of the product when the product is stretched out in a deployed state of use.

With respect to claim 9, Cochrane discloses (Fig. 1) the pattern provides a donut configuration when the product is stretched out in a deployed state of use.

With respect to claim 10, Cochrane discloses (Fig. 1) the pattern provides a ball configuration when the product is stretched out in a deployed state of use.

With respect to claim 19, Cochrane discloses a barbed tape product (Figs. 1, 4) comprising a strand (50, 52) of the product in the form of a continuous helical coil; a first attachment configuration including at least a first attachment point (70) on the strand; a second attachment configuration including at least a second attachment point (72) on the strand; wherein the first and second configurations corresponds to respective first and second lengths of the strand that each extend through an arc of approximately 360 degrees or more and wherein the first attachment point is circumferentially offset relative to all second attachment points including the second attachment point.

With respect to claim 20, Cochrane discloses (Fig. 1) that further comprising a first attachment at the first attachment point (70); a second attachment at the second attachment point (72); wherein the first and second attachments attach the first length to the second length of the strand and the first and second lengths form adjacent first and second loops of the strand corresponding to respective first and second adjacent cycles.

With respect to claim 21, Cochrane discloses (Fig. 1) that the first attachment configuration comprises a plurality of first attachment points (70) including the first attachment point; the second attachment configuration comprises a plurality of second attachment points (72) including the second attachment point; wherein each of the plurality of first attachment points (70, 72) are circumferentially offset relative to each of the plurality of second attachment points.

With respect to claim 22, Cochrane discloses (Fig. 1) that further comprising a plurality of first attachments at the plurality of first attachment points (70) and a plurality of second attachments at the plurality of second attachment points (72).

With respect to claim 23, Cochrane discloses (Fig. 1) that the plurality of first attachments and the plurality of second attachments attach first and second pairs of loops comprising adjacent lengths of the strand together, wherein the first and second pairs of loops correspond to respective first and second adjacent cycles in a helically progressive pattern forming a barbed tape concertina product.

With respect to claim 24, Cochrane discloses (Fig. 1) that the plurality of first attachments and the plurality of second attachments attach first and second adjacent lengths comprising adjacent first and second loops of the strand (50, 52) together, wherein the first and second lengths correspond to respective first and second adjacent cycles in a helically progressive pattern forming a barbed tape product.

Claims 25-52, 54, and 70-74 lack lack of an inventive step under PCT Article 33(3) as being obvious over US Patent No. 5,109,583 Pavlov.

With respect to claims 25, 52, and 54, Pavlov discloses a method of forming a barbed tape concertina product (Fig. 1, column 4, lines 49-67), the method comprising coiling the strand of product (18) in loops of a predetermined radius; and attaching adjacent loops together at predetermined positions along the strand of product; attaching the strand (18) to the machine (10) by motor driven in a conventional manner. steps of forming, coiling, and attaching the product by motor driven in a conventional manner; and the first loop is adjacent to the second loop. Pavlov does not disclose that the step method of programming an electronic controller for automatically and operating the machine under electronic controller control to complete operational. It would have been obvious step method to one ordinary skill in the art to employee the above programming an electronic controller to operate the machine in order automatically feed the stand product into the machine.

With respect to claim 26, Pavlov discloses (column 5, lines 62-65) the step of attaching comprises connecting a first pair of adjacent loops together at a first attachment point at a first predetermined circumferential position on the coils; and connecting a second pair of adjacent loops together at a second attachment point at a second predetermined circumferential position on the coils circumferentially spaced from the first position.

With respect to claim 27, Pavlov discloses the step method attaching of the first pair of loops is adjacent to the second pair of loops.

With respect to claim 28, Pavlov discloses the method further comprising the steps of connecting the adjacent loops together at one or more additional attachment points in at least one helically progressive circumferential position between the first position and the second position.

With respect to claim 29, Pavlov discloses the method of connecting the adjacent loops together by the one or more additional attachment points comprises connecting the adjacent loops together at a plurality of additional attachment points between the first position and the second position in a helically progressive pattern.

With respect to claim 30, Pavlov discloses a method of forming a barbed tape concertina product (Fig. 1, column 4, lines 49-67), a step of the strand of product (18) forms a coil having a predetermined length comprising a plurality of adjacent loops; and the step of operating the Form PCT/ISA/237 (Supplemental Box) (April 2005)

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machine (10) to complete the operational step of attaching, (column 6, lines 60-61) comprises connecting adjacent loops together at attachment points at predetermined helically progressive circumferential positions in accordance with a predetermined pattern.

With respect to claims 31 and 32, Pavlov teaches the limitations except the method of the step of programming for automatically attaching comprises programming the electronic controller for attaching in the predetermined pattern of positions along the strand of product; and the predetermined pattern is a first pattern, the step of programming comprises programming the electronic controller for attaching in the first pattern for a first roll of product and programming the electronic controller to vary from the first pattern for attaching in a second pattern between rolls or in a second roll of product. It would have been obvious step method to one ordinary skill in the art to employ the above programming an electronic controller to operate the machine in order automatically feed the stand product into the machine.

With respect to claims 33-35, Pavlov teaches the limitations except the step of attaching the product comprises automatically connecting loops of the product at a rate of approximately 125 attachment points in 320 seconds or less; the step of attaching the product comprises automatically connecting loops of the product at a rate of approximately 125 attachment points in 300 seconds or less; and the step of attaching the product comprises automatically connecting loops of the product at a rate of approximately 125 attachment points in 240 seconds or less.

With respect to claim 36, Pavlov discloses (Fig. 4, column 6, lines 5-6) the step of forming the strand of product comprises connecting a strand of tape (14) to a strand of wire (100) in the machine (10).

With respect to claims 37-40, Pavlov teaches the limitations except that further comprising a step of selecting attachment point placement; the step of selecting attachment point placement comprises selecting at least one or a plurality of frequency for attachment point placement; the step of selecting the attachment point placement further comprises forming a dead space or skipping at least one unit in the frequency of the attachment point placement. It would have been obvious step method to one ordinary skill in the art to employ the above selecting attachment point placement in order to connect two ends of the adjacent tape together.

With respect to claims 41-45, Pavlov teaches the limitations except that wherein the step of selecting attachment point placement further comprises a preliminary step of preprogramming the electronic controller to automatically place the attachment points; forming a barbed tape concertina product, the method comprising programming an electronic controller for automatically attaching adjacent loops of the product together in a predetermined pattern of positions along a strand of the product forming the loops; the step of programming further comprises programming the electronic controller to automatically vary the pattern of positions from a first roll of the product to a second roll of the product, the method further comprising automatically forming at least the first and the second rolls of the product and varying the pattern from the first roll of the product to the second roll of the product; and the step of programming further comprises programming the electronic controller to automatically vary the pattern of positions between respective ones of a plurality of rolls, the method further comprising automatically forming the plurality of rolls and varying the pattern for a length of the product between said respective ones of the rolls. It would have been obvious step method to one ordinary skill in the art to employ the above step of programming the electronic controller in order to connect two ends of the adjacent tape together.

With respect to claim 46, Pavlov discloses A machine (10, Fig. 1) for connecting the tape (14) to itself at predetermined positions to form a roll of the barbed. Pavlov does not disclose that the machine comprising an electronic controller operatively connected to an attachment device in the machine for automatically attaching the barbed tape concertina product to itself at predetermined positions to form a roll of the barbed tape concertina product. It would have been obvious step method to one ordinary skill in the art to provide the above machine with a electronic controller in order to automatically feed the stand product into the machine.

With respect to claims 47-51, Pavlov discloses (Fig. 7) that the machine (10) further comprising a roll former (135); a radial bender (90); and a take up device (15). Pavlov does not disclose that the electronic controller is operatively connected to the roll former, the radial bender, and the take up device to form the roll of barbed tape concertina product; the attaching device and electronic controller are configured to variably attach adjacent loops of the product together at predetermined attachment points corresponding to the predetermined positions under electronic control; the electronic controller is configured to provide a first set of the attachment points in a predetermined first pattern for a first roll of the product; a second set of the attachment points in a predetermined second pattern for a second roll of the product; wherein the patterns are varied from the first set to the second set; the electronic controller is configured to provide: a set of the attachment points in a predetermined pattern for a roll of the product; and a variation of the pattern within the roll. It would have been obvious to one ordinary skill in the art to provide the machine of Pavlov with a electronic controller to automatically feed the stand product into the machine configuring the variation of attachment points for attaching adjacent loops together in order to maximize the production of barbed tape.

With respect to claims 70-74, Pavlov discloses a method of forming a barbed tape product, comprising forming the product into a helical coil. Pavlov does not disclose the step of automatically attaching at least one object to a strand of the coil under the control of an electronic controller; further comprising automatically attaching a plurality of objects including the object to the strand of the coil; the plurality of objects includes a plurality of similar objects; the plurality of objects includes a plurality of similar or dissimilar objects. It would have been obvious step method to one ordinary skill in the art to employ the automatic attachment of object or a plurality of objects such different parts of machine to the strand in order to form a tape product.  
Claims 90-102, 118-121, and 123-125 lack of novelty under PCT Article 33(2) as being anticipated by US Patent No. 3,155,374 Sieffert.



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**Supplemental Box**

**In case the space in any of the preceding boxes is not sufficient.**

With respect to claim 90, Sieffert discloses a tape product (Figs. 1-4) comprising a concertina coil (1); at least one of an internal truss and external trusses (3; 2a) connected to the coil (1) at a plurality of connection points (4, 5; 6-10); wherein the truss strengthens or stabilizes the coil.

With respect to claim 91, Sieffert discloses (Figs. 1-4) that the concertina coil (1) is a first concertina coil and the truss is an integral portion of at least one additional concertina coil (2) that intersects with and is connected to the first concertina coil (1).

With respect to claim 92, Shieffert discloses (Figs. 2 and 4) that the truss comprises a compression member (3) connected at the connection points to portion of the coil (1) which the truss member inherently functions as a compressive and tensile member because of external force; and the truss holds the portions away from each other at a predetermined distance.

With respect to claim 93, Shieffert discloses (Fig. 4) that the connection points (4, 5; 6-10) defining a chord of the coil (1).

With respect to claim 94, Shieffert discloses (Fig. 4) that the truss (2a) includes a upright truss connected to the diametrically opposite portions of the coil; and at least one additional truss (2) is connected to an additional portion of the coil (1) at one or more of additional connection points (4, 5; 6-10).

With respect to claim 95, Shieffert discloses (Fig. 1 and 4) that the trusses (3, 2a) comprise at least one tension member (constituted by extension of the truss 2a) connected to the coil at one or more of the connection points (4, 5, 6).

With respect to claim 96, Shieffert discloses (Figs. 1 and 4) that the coil (1) is a first coil; the tape product further comprises a second coil (2); and the truss (2a) suspends the second coil (2) within the first coil.

With respect to claim 97, Shieffert discloses that the truss comprises an external truss (2) that forms a blister or spur extending radially outside an envelope of the coil.

With respect to claim 98, Shieffert discloses that the truss (3) is a first truss; the tape product comprises a plurality of trusses including the first truss (3); and the plurality of trusses (3, 2a) comprises at least one tension member and at least one compression member.

With respect to claim 99, Shieffert discloses that the tension member and the compression member 93, 2a) are interconnected to provide the spur.

With respect to claim 100, Shieffert discloses that the plurality of trusses (2) comprise a plurality of upright compression members (2a) and a plurality of spurs (3).

With respect to claim 101, Shieffert discloses that the tap product further comprising an accessory platform mounted on an end of at least one of the upright compression members.

With respect to claim 102, Shieffert discloses (Fig. 4) that the truss is a first truss (2a); the tape product includes a plurality of trusses (2) including the first truss (2a); and the plurality of trusses form at least one blister on the coil.

With respect to claim 118, Sieffert discloses a shaped concertina tape product (Fig. 3) comprising a concertina coil (1) forming an envelope of a predetermined configuration; a plurality of trusses (2a) connected to the coil (1); wherein the coil is rigidified against forces in one or more direction so that in a deployed state, an original dimension of the envelope in a rigidified direction is maintained while a dimension in a non-rigidified direction is reduced.

With respect to claim 119, Sieffert discloses (Fig. 3) that the envelope has an elliptical section in the deployed state.

With respect to claim 120, Sieffert discloses that the envelope has a generally give section in the deployed state.

With respect to claim 121, Sieffert discloses that the trusses (2a) comprise upright trusses and the rigidified direction is in a generally vertical direction.

With respect to claim 123, Sieffert discloses (Fig. 3) that the configuration of the envelope has a variety of preselected sectional dimensions along a length of the coil.

With respect to claim 124, Sieffert discloses (Fig. 3) that the concertina coil is formed by a plurality concertina coil (1) segments having respective helically progressive strands each having an end connected to an end of an adjacent one of the plurality of concertina coil segments; wherein the strand of each adjacent segment progresses helically in an opposite rotational direction relative to the adjacent coil segment.

With respect to claim 125, Sieffert discloses (Fig. 3) that the plurality of segments alternatingly comprise respective clockwise and counterclockwise helically progressive strands connected end to end.

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Claim 122 lacks of an inventive step under PCT Article 33(3) as being obvious over Sieffert.

With respect to claim 122, Sieffert discloses the claimed invention except that a vertical dimension of the coil is approximately eighty inches in both the deployed state and the retracted state and a horizontal dimension is approximately sixty four inches in the deployed state. It would have been obvious to one of ordinary skill in the art at the time of invention was made through routine experimentation and optimization provide the coil with respective vertical dimension claimed to Sieffert because one of ordinary skill is expected to routinely experiment to find the optimum values for a particular application.

Claims 103 and 126-128 lack of novelty under PCT Article 33(2) as being anticipated by US Patent No. D429,342 Binns.

With respect to claim 103, Binns discloses a plural coil tape product (shows in Figure) comprising a first concertina coil extending from a first end to a second end of the coil along a first coil axis; at least a second concertina coil extending generally from a first end to a second end of the coil along a second coil axis; and the second concertina coil intersecting the first concertina coil in at least partially overlapping side by side relation in a first intersection along the first and second coil axes; wherein the first intersection comprises connection of the second concertina coil at more than one circumferentially spaced connection point on the first coil.

With respect to claim 126, Binns discloses a plural coil tape product (shows in Figure) comprising a first concertina coil extending from a first end to a second end of the coil along a first coil axis; at least a second concertina coil extending generally from a first end to a second end of the coil along a second coil axis; and the second concertina coil intersecting the first concertina coil in at least partially overlapping side by side relation along the first and second coil axes; wherein the first intersection comprises connection of the second concertina coil at more than one circumferentially spaced connection point on the first coil.; and a respective plurality of similarly formed internal trusses (2) generally form a repeating pattern of upright ovals along the first and second coil axes when view from a side in a deployed state.

With respect to claims 127 and 128, Binns discloses that the internal truss (2) comprising portions of the first and second coils (1); and which formed in a zig zag pattern along the first and second coil axes when viewed from above in a partially deployed state; wherein the internal truss comprises portions of the first and second coils (1); and the internal truss (2) forms a generally upright linear configuration as viewed from an axial end in a fully deployed state.

Claims 104-108 and 129 lack of an inventive step under PCT Article 33(3) as being obvious over Binns in view of Pub. No. US 2003/0099523 Pessach.

With respect to claim 108, Binns, as advanced above, discloses the claimed invention except for the coil product further comprising at least a third concertina coil extending generally from a first end to a second end of the third coil along a third coil axis; the third coil intersecting at least one of the first and second coils in at least partially overlapping side by side relation in a second intersection along the first, second, and third axes; wherein the second intersection comprises connection of the third concertina coil at more than one circumferentially spaced connection points on at least one of the first and second coils. Pessach teaches an extensible barrier having three or more coils intersecting with one another in a triangular configuration so that each of the three coils have greater structural support within the barrier which increase the size of the barrier and create a greater obstacle. It would have been obvious to one of ordinary skill in the art to modify the overlapping and intersecting coils of Binns to have a third coil forming a triangular relationship as to by Pessach so that each of the three coils have greater structural support within the barrier which also increase the size of the barrier to create a greater obstacle.

Claim 109 lacks of an inventive step under PCT Article 33(3) as being obvious over Binns in view of Pessach, and further in view of Sieffert.

With respect to claim 109, Binns in view of Pessach, as advanced above disclose the tape product as claimed, but do not disclose one or more trusses attached to at least one of the first, second, and third coils. Sieffert discloses (Fig. 1) a barbed wired coil having one or more trusses (2a) attached to a first coil (1) to strengthen the interior structure of the coil to impede progress of an intruder. It is noted that the trusses are generally well known as structural supports and the strengthening thereof. Therefore, it would have been obvious to one of ordinary skill in the art to modify the tape product of Binns in view of Pessach to have a truss attached to the coils as taught by Sieffert in order to strengthen the interior structure of the coil to impede progress of an intruder.

The plural coil tape product of claim 15, wherein the third coil intersects both of the first and second coils in overlapping side by side relation so that the first, second, and third coil axes generally define vertices of a triangular configuration of the coil tape product.

Claims 1-10, 19-108, and 118-129 the criteria set out in PCT Article 33(4), and thus has industrial applicability because the subject matter claimed can be made or used in industry.

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(PCT Rule 43bis.1)

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International application No. <b>PCT/US05/25658</b>	International filing date (day/month/year) <b>19 July 2005 (19.07.2005)</b>	Priority date (day/month/year) <b>19 July 2004 (19.07.2004)</b>
International Patent Classification (IPC) or both national classification and IPC <b>IPC: B21F 25/00( 2006.01);E04H 17/04( 2006.01)</b> <b>USPC: 256/5,2,8,7,33</b>		
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- ☐ Box No. VI      Certain documents cited
- ☐ Box No. VII      Certain defects in the international application
- ☒ Box No. VIII      Certain observations on the international application

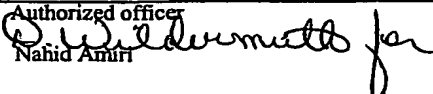
## 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Date of completion of this opinion <b>06 November 2006 (06.11.2006)</b>	Authorized officer  Nahid Amiri Telephone No. 571-272-8113
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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US05/25658

**Box No. I Basis of this opinion**

1. With regard to the language, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed  
☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing  
☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper  
☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.  
☐ filed together with the international application in electronic form.  
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

**WRITTEN OPINION OF THE  
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**Box No. IV Lack of unity of invention**

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the applicable time limit:
- ☐ paid additional fees
  - ☐ paid additional fees under protest and, where applicable, the protest fee
  - ☐ paid additional fees under protest but the applicable protest fee was not paid
  - ☒ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with
  - ☒ not complied with for the following reasons:  
See the lack of unity section of the International Search Report (Form PCT/ISA/210)

4. Consequently, this opinion has been established in respect of the following parts of the international application:

- ☐ all parts.
- ☒ the parts relating to claims Nos. 1-10, 19-108 and 118-129

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
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**Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)

Claims Please See Continuation Sheet YES

Claims Please See Continuation Sheet NO

Inventive step (IS)

Claims Please See Continuation Sheet YES

Claims Please See Continuation Sheet NO

Industrial applicability (IA)

Claims Please See Continuation Sheet YES

Claims Please See Continuation Sheet NO

**2. Citations and explanations:**

Please See Continuation Sheet

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

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**Box No. VIII Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the questions whether the claims are fully supported by the description, are made:

drawings are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 7 because: "at least one blister on the coil" of claim 102, line 4.

Claims 98-101 are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 indefinite because for the following reasons: with respect to claim 9, line 3, it is unclear which "trusses" applicant is referring to as "a plurality of trusses including the first truss". Is this truss same as "truss" of line 2?

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

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**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

**V.1. Reasoned Statements:**

The opinion as to Novelty was positive (Yes) with respect to claims 25-89, 104-108, and 122

The opinion as to Novelty was negative (No) with respect to claims 1-10, 19-24, 90-103, 118-121, and 123-128

The opinion as to Inventive Step was positive (Yes) with respect to claims 1-10, 19-24, 90-103, 118-121, 53, 55, 56, 75-89, and 123-128

The opinion as to Inventive Step was negative (NO) with respect to claims 25-52, 54, 70-74, 104-108, 122, and 129

The opinion as to Industrial Applicability was positive (YES) with respect to claims 1-10, 19-108, and 118-129

The opinion as to Industrial Applicability was negative (NO) with respect to claims NONE

**V. 2. Citations and Explanations:**

Claims 1-10 and 19-24 lack of novelty under PCT Article 33(2) as being anticipated by US Patent No. 5,139,234 Cochrane.

With respect to claim 1, Cochrane disclose a barbed tape concertina product (Figs. 1-4) comprising a strand of the product in the form of a continuous helical coil including at least a first pair of loops and a second pair of loops; a first attachment element (56) at a first attachment point (70) of the first pair of loops and holding the first pair of loops together; and a second attachment element (56) at a first attachment point (70) of the second pair of loops and holding the second pair of loops together; wherein the first attachment element (56) is circumferentially offset relative to the second attachment element.

With respect to claim 2, Cochrane discloses (Fig. 1) that the first and second pairs of loops are adjacent pairs of loops.

With respect to claim 3, Cochrane discloses (Fig. 1) that further comprising at least one additional attachment element (56) at a second attachment point (72) on the strand in a helically progressive position between the first attachment element and the second attachment element, the at least one additional attachment element holding the first and second pairs of loops together.

With respect to claim 4, Cochrane discloses (Fig. 3) that further comprising a plurality of additional attachment elements (56) at respective additional attachment points in helically progressive positions on the strand between the first and second attachment elements (56).

With respect to claim 5, Cochrane discloses (Fig. 1) that the continuous coil further comprises additional pairs of loops and additional attachment elements holding the loops of each pair together and holding the pairs of loops together; the attachment elements (56) generally positioned on one pair of loops so that each attachment element (56) is circumferentially offset relative to all other attachment elements on an adjacent pair of loops.

With respect to claim 6, Cochrane discloses (Fig. 1) that the attachment elements are positioned in a predetermined pattern on the continuous coil.

With respect to claim 7, Cochrane discloses (Fig. 1) that the pattern is a repeating pattern.



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**Supplemental Box**  
In case the space in any of the preceding boxes is not sufficient.

With respect to claim 8, Cochrane discloses (Fig. 1) that the pattern provides a predetermined natural configuration of the product when the product is stretched out in a deployed state of use.

With respect to claim 9, Cochrane discloses (Fig. 1) the pattern provides a donut configuration when the product is stretched out in a deployed state of use.

With respect to claim 10, Cochrane discloses (Fig. 1) the pattern provides a ball configuration when the product is stretched out in a deployed state of use.

With respect to claim 19, Cochrane discloses a barbed tape product (Figs. 1, 4) comprising a strand (50, 52) of the product in the form of a continuous helical coil; a first attachment configuration including at least a first attachment point (70) on the strand; a second attachment configuration including at least a second attachment point (72) on the strand; wherein the first and second configurations corresponds to respective first and second lengths of the strand that each extend through an arc of approximately 360 degrees or more and wherein the first attachment point is circumferentially offset relative to all second attachment points including the second attachment point.

With respect to claim 20, Cochrane discloses (Fig. 1) that further comprising a first attachment at the first attachment point (70); a second attachment at the second attachment point (72); wherein the first and second attachments attach the first length to the second length of the strand and the first and second lengths form adjacent first and second loops of the strand corresponding to respective first and second adjacent cycles.

With respect to claim 21, Cochrane discloses (Fig. 1) that the first attachment configuration comprises a plurality of first attachment points (70) including the first attachment point; the second attachment configuration comprises a plurality of second attachment points (72) including the second attachment point; wherein each of the plurality of first attachment points (70, 72) are circumferentially offset relative to each of the plurality of second attachment points.

With respect to claim 22, Cochrane discloses (Fig. 1) that further comprising a plurality of first attachments at the plurality of first attachment points (70) and a plurality of second attachments at the plurality of second attachment points (72).

With respect to claim 23, Cochrane discloses (Fig. 1) that the plurality of first attachments and the plurality of second attachments attach first and second pairs of loops comprising adjacent lengths of the strand together, wherein the first and second pairs of loops correspond to respective first and second adjacent cycles in a helically progressive pattern forming a barbed tape concertina product.

With respect to claim 24, Cochrane discloses (Fig. 1) that the plurality of first attachments and the plurality of second attachments attach first and second adjacent lengths comprising adjacent first and second loops of the strand (50, 52) together, wherein the first and second lengths correspond to respective first and second adjacent cycles in a helically progressive pattern forming a barbed tape product.

Claims 25-52, 54, and 70-74 lack lack of an inventive step under PCT Article 33(3) as being obvious over US Patent No. 5,109,583 Pavlov.

With respect to claims 25, 52, and 54, Pavlov discloses a method of forming a barbed tape concertina product (Fig. 1, column 4, lines 49-67), the method comprising coiling the strand of product (18) in loops of a predetermined radius; and attaching adjacent loops together at predetermined positions along the strand of product; attaching the strand (18) to the machine (10) by motor driven in a conventional manner. steps of forming, coiling, and attaching the product by motor driven in a conventional manner; and the first loop is adjacent to the second loop. Pavlov does not disclose that the step method of programming an electronic controller for automatically and operating the machine under electronic controller control to complete operational. It would have been obvious step method to one ordinary skill in the art to employee the above programming an electronic controller to operate the machine in order automatically feed the stand product into the machine.

With respect to claim 26, Pavlov discloses (column 5, lines 62-65) the step of attaching comprises connecting a first pair of adjacent loops together at a first attachment point at a first predetermined circumferential position on the coils; and connecting a second pair of adjacent loops together at a second attachment point at a second predetermined circumferential position on the coils circumferentially spaced from the first position.

With respect to claim 27, Pavlov discloses the step method attaching of the first pair of loops is adjacent to the second pair of loops.

With respect to claim 28, Pavlov discloses the method further comprising the steps of connecting the adjacent loops together at one or more additional attachment points in at least one helically progressive circumferential position between the first position and the second position.

With respect to claim 29, Pavlov discloses the method of connecting the adjacent loops together by the one or more additional attachment points comprises connecting the adjacent loops together at a plurality of additional attachment points between the first position and the second position in a helically progressive pattern.

With respect to claim 30, Pavlov discloses a method of forming a barbed tape concertina product (Fig. 1, column 4, lines 49-67), a step of the strand of product (18) forms a coil having a predetermined length comprising a plurality of adjacent loops; and the step of operating the Form PCT/ISA/237 (Supplemental Box) (April 2005)

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INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US05/25658

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

machine (10) to complete the operational step of attaching, (column 6, lines 60-61) comprises connecting adjacent loops together at attachment points at predetermined helically progressive circumferential positions in accordance with a predetermined pattern.

With respect to claims 31 and 32, Pavlov teaches the limitations except the method of the step of programming for automatically attaching comprises programming the electronic controller for attaching in the predetermined pattern of positions along the strand of product; and the predetermined pattern is a first pattern, the step of programming comprises programming the electronic controller for attaching in the first pattern for a first roll of product and programming the electronic controller to vary from the first pattern for attaching in a second pattern between rolls or in a second roll of product. It would have been obvious step method to one ordinary skill in the art to employ the above programming an electronic controller to operate the machine in order automatically feed the stand product into the machine.

With respect to claims 33-35, Pavlov teaches the limitations except the step of attaching the product comprises automatically connecting loops of the product at a rate of approximately 125 attachment points in 320 seconds or less; the step of attaching the product comprises automatically connecting loops of the product at a rate of approximately 125 attachment points in 300 seconds or less; and the step of attaching the product comprises automatically connecting loops of the product at a rate of approximately 125 attachment points in 240 seconds or less.

With respect to claim 36, Pavlov discloses (Fig. 4, column 6, lines 5-6) the step of forming the strand of product comprises connecting a strand of tape (14) to a strand of wire (100) in the machine (10).

With respect to claims 37-40, Pavlov teaches the limitations except that further comprising a step of selecting attachment point placement; the step of selecting attachment point placement comprises selecting at least one or a plurality of frequency for attachment point placement; the step of selecting the attachment point placement further comprises forming a dead space or skipping at least one unit in the frequency of the attachment point placement. It would have been obvious step method to one ordinary skill in the art to employ the above selecting attachment point placement in order to connect two ends of the adjacent tape together.

With respect to claims 41-45, Pavlov teaches the limitations except that wherein the step of selecting attachment point placement further comprises a preliminary step of preprogramming the electronic controller to automatically place the attachment points; forming a barbed tape concertina product, the method comprising programming an electronic controller for automatically attaching adjacent loops of the product together in a predetermined pattern of positions along a strand of the product forming the loops; the step of programming further comprises programming the electronic controller to automatically vary the pattern of positions from a first roll of the product to a second roll of the product, the method further comprising automatically forming at least the first and the second rolls of the product and varying the pattern from the first roll of the product to the second roll of the product; and the step of programming further comprises programming the electronic controller to automatically vary the pattern of positions between respective ones of a plurality of rolls, the method further comprising automatically forming the plurality of rolls and varying the pattern for a length of the product between said respective ones of the rolls. It would have been obvious step method to one ordinary skill in the art to employ the above step of programming the electronic controller in order to connect two ends of the adjacent tape together.

With respect to claim 46, Pavlov discloses A machine (10, Fig. 1) for connecting the tape (14) to itself at predetermined positions to form a roll of the barbed. Pavlov does not disclose that the machine comprising an electronic controller operatively connected to an attachment device in the machine for automatically attaching the barbed tape concertina product to itself at predetermined positions to form a roll of the barbed tape concertina product. It would have been obvious step method to one ordinary skill in the art to provide the above machine with a electronic controller in order to automatically feed the stand product into the machine.

With respect to claims 47-51, Pavlov discloses (Fig. 7) that the machine (10) further comprising a roll former (135); a radial bender (90); and a take up device (15). Pavlov does not disclose that the electronic controller is operatively connected to the roll former, the radial bender, and the take up device to form the roll of barbed tape concertina product; the attaching device and electronic controller are configured to variably attach adjacent loops of the product together at predetermined attachment points corresponding to the predetermined positions under electronic control; the electronic controller is configured to provide a first set of the attachment points in a predetermined first pattern for a first roll of the product; a second set of the attachment points in a predetermined second pattern for a second roll of the product; wherein the patterns are varied from the first set to the second set; the electronic controller is configured to provide: a set of the attachment points in a predetermined pattern for a roll of the product; and a variation of the pattern within the roll. It would have been obvious to one ordinary skill in the art to provide the machine of Pavlov with a electronic controller to automatically feed the stand product into the machine configuring the variation of attachment points for attaching adjacent loops together in order to maximize the production of barbed tape.

With respect to claims 70-74, Pavlov discloses a method of forming a barbed tape product, comprising forming the product into a helical coil. Pavlov does not disclose the step of automatically attaching at least one object to a strand of the coil under the control of an electronic controller; further comprising automatically attaching a plurality of objects including the object to the strand of the coil; the plurality of objects includes a plurality of similar objects; the plurality of objects includes a plurality of similar or dissimilar objects. It would have been obvious step method to one ordinary skill in the art to employ the automatic attachment of object or a plurality of objects such different parts of machine to the strand in order to form a tape product.  
Claims 90-102, 118-121, and 123-125 lack of novelty under PCT Article 33(2) as being anticipated by US Patent No. 3,155,374 Sieffert.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US05/25658

**Supplemental Box**

**In case the space in any of the preceding boxes is not sufficient.**

With respect to claim 90, Sieffert discloses a tape product (Figs. 1-4) comprising a concertina coil (1); at least one of an internal truss and external trusses (3; 2a) connected to the coil (1) at a plurality of connection points (4, 5; 6-10); wherein the truss strengthens or stabilizes the coil.

With respect to claim 91, Sieffert discloses (Figs. 1-4) that the concertina coil (1) is a first concertina coil and the truss is an integral portion of at least one additional concertina coil (2) that intersects with and is connected to the first concertina coil (1).

With respect to claim 92, Shieffert discloses (Figs. 2 and 4) that the truss comprises a compression member (3) connected at the connection points to portion of the coil (1) which the truss member inherently functions as a compressive and tensile member because of external force; and the truss holds the portions away from each other at a predetermined distance.

With respect to claim 93, Shieffert discloses (Fig. 4) that the connection points (4, 5; 6-10) defining a chord of the coil (1).

With respect to claim 94, Shieffert discloses (Fig. 4) that the truss (2a) includes a upright truss connected to the diametrically opposite portions of the coil; and at least one additional truss (2) is connected to an additional portion of the coil (1) at one or more of additional connection points (4, 5; 6-10).

With respect to claim 95, Shieffert discloses (Fig. 1 and 4) that the trusses (3, 2a) comprise at least one tension member (constituted by extension of the truss 2a) connected to the coil at one or more of the connection points (4, 5, 6).

With respect to claim 96, Shieffert discloses (Figs. 1 and 4) that the coil (1) is a first coil; the tape product further comprises a second coil (2); and the truss (2a) suspends the second coil (2) within the first coil.

With respect to claim 97, Shieffert discloses that the truss comprises an external truss (2) that forms a blister or spur extending radially outside an envelope of the coil.

With respect to claim 98, Shieffert discloses that the truss (3) is a first truss; the tape product comprises a plurality of trusses including the first truss (3); and the plurality of trusses (3, 2a) comprises at least one tension member and at least one compression member.

With respect to claim 99, Shieffert discloses that the tension member and the compression member 93, 2a) are interconnected to provide the spur.

With respect to claim 100, Shieffert discloses that the plurality of trusses (2) comprise a plurality of upright compression members (2a) and a plurality of spurs (3).

With respect to claim 101, Shieffert discloses that the tap product further comprising an accessory platform mounted on an end of at least one of the upright compression members.

With respect to claim 102, Shieffert discloses (Fig. 4) that the truss is a first truss (2a); the tape product includes a plurality of trusses (2) including the first truss (2a); and the plurality of trusses form at least one blister on the coil.

With respect to claim 118, Sieffert discloses a shaped concertina tape product (Fig. 3) comprising a concertina coil (1) forming an envelope of a predetermined configuration; a plurality of trusses (2a) connected to the coil (1); wherein the coil is rigidified against forces in one or more direction so that in a deployed state, an original dimension of the envelope in a rigidified direction is maintained while a dimension in a non-rigidified direction is reduced.

With respect to claim 119, Sieffert discloses (Fig. 3) that the envelope has an elliptical section in the deployed state.

With respect to claim 120, Sieffert discloses that the envelope has a generally give section in the deployed state.

With respect to claim 121, Sieffert discloses that the trusses (2a) comprise upright trusses and the rigidified direction is in a generally vertical direction.

With respect to claim 123, Sieffert discloses (Fig. 3) that the configuration of the envelope has a variety of preselected sectional dimensions along a length of the coil.

With respect to claim 124, Sieffert discloses (Fig. 3) that the concertina coil is formed by a plurality concertina coil (1) segments having respective helically progressive strands each having an end connected to an end of an adjacent one of the plurality of concertina coil segments; wherein the strand of each adjacent segment progresses helically in an opposite rotational direction relative to the adjacent coil segment.

With respect to claim 125, Sieffert discloses (Fig. 3) that the plurality of segments alternately comprise respective clockwise and counterclockwise helically progressive strands connected end to end.

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**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Claim 122 lacks of an inventive step under PCT Article 33(3) as being obvious over Sieffert.

With respect to claim 122, Sieffert discloses the claimed invention except that a vertical dimension of the coil is approximately eighty inches in both the deployed state and the retracted state and a horizontal dimension is approximately sixty four inches in the deployed state. It would have been obvious to one of ordinary skill in the art at the time of invention was made through routine experimentation and optimization provide the coil with respective vertical dimension claimed to Sieffert because one of ordinary skill is expected to routinely experiment to find the optimum values for a particular application.

Claims 103 and 126-128 lack of novelty under PCT Article 33(2) as being anticipated by US Patent No. D429,342 Binns.

With respect to claim 103, Binns discloses a plural coil tape product (shows in Figure) comprising a first concertina coil extending from a first end to a second end of the coil along a first coil axis; at least a second concertina coil extending generally from a first end to a second end of the coil along a second coil axis; and the second concertina coil intersecting the first concertina coil in at least partially overlapping side by side relation in a first intersection along the first and second coil axes; wherein the first intersection comprises connection of the second concertina coil at more than one circumferentially spaced connection point on the first coil.

With respect to claim 126, Binns discloses a plural coil tape product (shows in Figure) comprising a first concertina coil extending from a first end to a second end of the coil along a first coil axis; at least a second concertina coil extending generally from a first end to a second end of the coil along a second coil axis; and the second concertina coil intersecting the first concertina coil in at least partially overlapping side by side relation along the first and second coil axes; wherein the first intersection comprises connection of the second concertina coil at more than one circumferentially spaced connection point on the first coil.; and a respective plurality of similarly formed internal trusses (2) generally form a repeating pattern of upright ovals along the first and second coil axes when view from a side in a deployed state.

With respect to claims 127 and 128, Binns discloses that the internal truss (2) comprising portions of the first and second coils (1); and which formed in a zig zag pattern along the first and second coil axes when viewed from above in a partially deployed state; wherein the internal truss comprises portions of the first and second coils (1); and the internal truss (2) forms a generally upright linear configuration as viewed from an axial end in a fully deployed state.

Claims 104-108 and 129 lack of an inventive step under PCT Article 33(3) as being obvious over Binns in view of Pub. No. US 2003/0099523 Pessach.

With respect to claim 108, Binns, as advanced above, discloses the claimed invention except for the coil product further comprising at least a third concertina coil extending generally from a first end to a second end of the third coil along a third coil axis; the third coil intersecting at least one of the first and second coils in at least partially overlapping side by side relation in a second intersection along the first, second, and third axes; wherein the second intersection comprises connection of the third concertina coil at more than one circumferentially spaced connection points on at least one of the first and second coils. Pessach teaches an extensible barrier having three or more coils intersecting with one another in a triangular configuration so that each of the three coils have greater structural support within the barrier which increase the size of the barrier and create a greater obstacle. It would have been obvious to one of ordinary skill in the art to modify the overlapping and intersecting coils of Binns to have a third coil forming a triangular relationship as to by Pessach so that each of the three coils have greater structural support within the barrier which also increase the size of the barrier to create a greater obstacle.

Claim 109 lacks of an inventive step under PCT Article 33(3) as being obvious over Binns in view of Pessach, and further in view of Sieffert.

With respect to claim 109, Binns in view of Pessach, as advanced above disclose the tape product as claimed, but do not disclose one or more trusses attached to at least one of the first, second, and third coils. Sieffert discloses (Fig. 1) a barbed wired coil having one or more trusses (2a) attached to a first coil (1) to strengthen the interior structure of the coil to impede progress of an intruder. It is noted that the trusses are generally well known as structural supports and the strengthening thereof. Therefore, it would have been obvious to one of ordinary skill in the art to modify the tape product of Binns in view of Pessach to have a truss attached to the coils as taught by Sieffert in order to strengthen the interior structure of the coil to impede progress of an intruder.

The plural coil tape product of claim 15, wherein the third coil intersects both of the first and second coils in overlapping side by side relation so that the first, second, and third coil axes generally define vertices of a triangular configuration of the coil tape product.

Claims 1-10, 19-108, and 118-129 the criteria set out in PCT Article 33(4), and thus has industrial applicability because the subject matter claimed can be made or used in industry.